Petitioner's Contact Information:

Bonta Vita, Inc.
Attn: Mehdi Shahbazi
Phone: 800-953-0923
Email: mitishahbazi2@gmail.com
Address: 1660 Chicago Ave, Suite M21, Riverside

Petition for Exemption Summary

Bonta Vita, Inc. is a distributor of agricultural drones in Riverside, California where the have sold DJI drones for two years. Bonta Vita, Inc. wishes to extend its services to include UAS spraying operations and land survey; therefore, we are filing the paperwork for an exemption from the listed Federal Aviation Regulations (FARs) to conduct agricultural UAS operations.

If the Petitioner does not have the option of using the Petitioner's UAS, the only other way to spray the ground areas is by using manned aircraft, which pose a danger to the pilot as well as individuals on the ground. No pilots on board the UAS, and due to the small size of the UAS, there is less risk posed to the public on the ground in case of an emergency. Additionally, the UAS has multiple motors, while most manned aircraft have only one engine; thus, there is some motor redundancy for some UAS in case of a motor malfunction. Manned airplanes and helicopters produce significant amounts of noise pollution, disrupting the quiet enjoyment of private property of the public on the ground. UAS are much quieter and will not disturb the public as much as manned aircraft; thus, the public will benefit from a reduction in noise pollution.
In addition to noise pollution reduction, engine-powered aircraft produce exhaust, which affects the environment, while the UAS of the Petitioner is electric and does not create any emission. The byproduct of JET-A or 100LL fuel emissions is entering the air the public breathes while electric motors produce none. The use of UAS benefits the environment and public health. UAS uses batteries for power, which are not as flammable and explosive as JET-A or 100LL. An emergency where the UAS crashed, there is less of a chance for individuals injured from an explosion or fire. UAS also uses smaller propellers than manned helicopters, which will cause far less damage in the case of a crash than the typically manned helicopter crash.

Lastly, UAS use lower altitudes than most manned aircraft. This vertical separation dramatically reduces the chance of a mid-air collision and the resulting catastrophic carnage on the ground. Thus, the public benefits by having less risk from mid-air collision wreckage impact.

For this reason, operation of the DJI Agras T30 unmanned aircraft system (UAS) with a maximum takeoff weight above fifty-five pounds is necessary. Bonta Vita, Inc. hereby applies for exemptions to operate under the Special Authority of Certain Unmanned Systems, 49 U.S.C. 44807. Bonta Vita, Inc. seeks exemption from the following provisions of 14 C.F.R. Parts 61 and 91 and is similar in material to UASolutions Group, Inc (exemption number 18009) and Empire Drone Company, LLC (exemption number 18831).

Requested exemptions:

14 C.F.R. 107.36, Carriage of hazardous material
14 C.F.R. 61.3(a)(1)(i)- Requirement for certificates, ratings, and authorizations.
14 C.F.R. 91.7(a)- Civil aircraft airworthiness.
14 C.F.R. 91.119(c)- Minimum safe altitudes: General.
14 C.F.R. 91.121- Altimeter settings.
14 C.F.R. 91.151(b)- Fuel requirements for flight in VFR conditions.
14 C.F.R. 91.405(a)-Maintenance required.
14 C.F.R. 91.407(a)(1)- Operation after maintenance, preventive maintenance, rebuilding, or alteration.
14 C.F.R. 91.409(a)(1)(2)- Inspections.
14 C.F.R. 91.417(a)(b)- Maintenance records.
14 C.F.R. 137.19(c), Certification Requirements, Commercial operator – pilots
14 C.F.R. 137.19(d), Certification Requirements- Aircraft

14 C.F.R. 137.19(e)(2)(ii), Certification Requirements; Knowledge and skill tests; skills; approaches to the working area
14 C.F.R. 137.19(e)(2)(iii), Certification Requirements; Knowledge and skill tests; skills; flare-outs
14 C.F.R. 137.19(e)(2)(v), Certification Requirements; Knowledge and skill tests; skills; pull-ups and turnarounds
14 C.F.R. 137.31(a), Aircraft Requirements; Certification Requirements
14 C.F.R. 137.31(b), Shoulder Harnesses
14 C.F.R. 137.33(a), Carrying of certificate; Certificate carried on the aircraft
14 C.F.R. 137.33(b), Registration and airworthiness certificates available
14 C.F.R. 137.41(c), Personnel; Pilot in command; demonstration of knowledge and skills
14 C.F.R. 137.41(c), Personnel; Pilot in command; commercial certificate
14 C.F.R. 137.42, Fastening of safety belts and shoulder harnesses

Concept of Operations

The DJI Agras T30 will be used for the purpose of crop spraying and applications of fertilizer or seed to areas that would otherwise be impractical for large aircraft or ground applicators. Operations with the DJI Agras T30 is generally safer as compared to operations of manned aircraft since the UAS will be carrying significantly less product, travel less distance in the airspace between operation site and refill/landing station, spend more time at very low altitudes, and won't have to fly over public spaces during and between operations.

Operations Manual

Attached to this document include the Safety Guidelines and Disclaimer, User Manual, Intelligent Flight Battery User Guide, and Intelligent Battery Station User Guide. These manuals and guides outline the operational and maintenance procedures for safe operations of the DJI Agras T30.

Emergency Procedures

The DJI Agras T30 has many built in safety features that help prevent unanticipated accidents. The autonomy of the UAS removes much of the human error that could pose significant risk when unexpected situations arise. For loss of link between the remote and aircraft or other technological issues that can occur during flight, the return to home function initiates the aircraft to return to a prerecorded site at a safe altitude set by the pilot in command. In the scenario where battery is insufficient to return to the prerecorded location, the aircraft will automatically land where it is in the application area. Since applications will never be made over a public sensitive area, landing anywhere in the application region will avoid any harm to nearby observers or public structures. Visual line of sight and the use of visual observers strategically placed near the application site avoids potential issues if manual intervention is required.

Checklists

Attached to this document includes a checklist that will be completed prior to each flight to ensure the UAS is in condition to safely complete the mission.

Maintenance Document

Attached to this petition is the maintenance log document for the DJI Agras T30. Maintenance will be performed as outlined in the 'Disclaimer and Safety Guidelines' booklet under the 'Maintenance' section.

Aircrew Training Manual

Attached to this document is the aircrew training manual, which provides an equivalent level of safety to the exempted regulations and comprehensive training course for the proposed operations. This manual includes theory and practical components, a pilot theory exam, and supervised operational familiarization training on

agricultural spraying; additionally, the manual provides the training program requirements for examination, flight test, and periodic training.

Operation Risk and Safety Manual

Attached to this document is the operation risk and safety manual, which provides an equivalent level of safety to the exempted regulations. This manual identifies risks specific to the proposed operations, provides procedures to mitigate those risks, and determines whether residual risk is acceptable.

Flight Operations and Procedures Manual

Attached to this document is the flight operations and procedures manual that provides an equivalent level of safety as the exempted regulations. This manual contains flying procedures, pre-and post-flight procedures, and maintenance information.

Pilot Certification

Prior to operation of the DJI Agras T30, pilots will be tested on their ability to safely and effectively use the UAS. Pilots will be trained and tested on emergency procedures, safety guidelines, and proper care and operations of the DJI Agras T30 system. Pilots will demonstrate sufficient knowledge of aircraft capabilities and limitations in manual and autonomous mode and demonstrate their ability to handle the system if communication is lost between the remote and aircraft.

Reason and Extent of Relief

14 C.F.R. 107.36, Carriage of hazardous material

Section 107.36 says, “A small unmanned aircraft may not carry hazardous material. For purposes of this section, the term hazardous material is defined in 49 CFR 171.8.” Some of the chemicals dispensed during agricultural aircraft operations classify as a hazardous material. Because this regulation is not waivable under 107.205, we are requesting an exemption from it. An equivalent level of safety is achieved by requiring the Petitioner to obtain an FAA agricultural aircraft operator certificate before operations, use pilots who have a remote pilot certificate, follow any restrictions placed on the agricultural aircraft operator certificate, and limit the hazardous material carried to only economic poisons. The requirement to use only FAA-certificated remote pilots also alleviates any security concerns as the TSA would have already done a background check on the individual possessing the pilot certificate.

61.3(a)(1)(i) Requirement for certificates, ratings, and authorizations

Bonta Vita, Inc. seeks exemption from the certificates, ratings, and authorizations requirements stated in 14 CFR 61.3(a)(1)(i). Bonta Vita, Inc. believes the specific training for UAS will be more pertinent for the operations that will be conducted with the DJI Agras T30. Pilots will have to be certified through UAS training and testing that will challenge their ability to operate the Agras T30 safely and demonstrate their knowledge about the rules and regulations that are associated with spreading and spraying operations. Pilots will already be certified under part 107 through the FAA, testing their knowledge of small UAS. Bonta Vita, Inc. believes that the training and testing pilots undergo will maintain a level of safety consistent with the rules outlined in 14 CFR 61.3(a)(1)(i).

91.7(a) Civil aircraft airworthiness

Bonta Vita, Inc. seeks exemption from the civil aircraft airworthiness rule since the DJI Agras T30 will not have an airworthiness certificate. The Agras T30 will only be operated after aircraft preflight checks verify the aircraft is functionally sound. The preflight checklists will ensure that the aircraft is inspected regularly for any issues that could adversely affect the flight of the aircraft, and action to correct any issue will be completed before flight is attempted and recorded on the maintenance documents.

91.119(c) Minimum safe altitudes

Bonta Vita, Inc. seeks exemption from the minimum safe altitudes rule since the DJI Agras T30 will never be operated above 400 feet which is the limit for other sUAS under part 107. During operations, the height of the aircraft will typically apply product about ten to twenty feet above the height of the target crop, ground, or foliage with most operations being conducted below fifty feet above ground level. When returning to the landing site or traveling to the field for operation, the aircraft will likely fly higher than the operational heights but only to avoid obstacles near the ground but always below 400 feet to avoid manned aircraft in the area. The lower operational height of the Agras T30 is a safety benefit to other manned aircraft in nearby airspace and to the public since operation at a lower height will be safer if manual intervention of the controls is required with increased visibility of the aircraft and any nearby obstacles.

91.121 Altimeter settings

Bonta Vita, Inc. seeks exemption from the required altimeter settings required by manned aircraft since the DJI Agras T30 will control altitude based on global positioning system (GPS) or radar. GPS and radar are highly accurate when reporting altitude of the aircraft and the preflight checklist will help ensure the systems are in good working conditions to report accurate altitude positions that will maintain an equivalent level of safety to the altimeter settings required by 14 C.F.R. 91.121.

91.151(b) Fuel requirements for flight in VFR conditions

Bonta Vita, Inc. seeks exemption from the fuel requirement when flying in VFR conditions that would require a twenty-minute fuel reserve to be maintained. Flight operation of the DJI Agras T30 will be conducted with the automatic return-to-home function that directs the aircraft to return to the landing site when it has either disposed all of the product or when the battery level is low. The low battery return-to-home action is available in the 'Route' and 'AB Route' operation modes. If the pilot is operating in the 'manual' or 'manual plus' operation mode, the pilot will select the return-to-home button to enable the return-to-home function or the pilot will manually fly the aircraft to the landing site when the low battery warning is indicated on the remote controller. The low battery threshold will be set to allow ample time for the aircraft to safely return to the landing site while considering weather conditions and distance from the operational area to the landing site.

91.405(a), 91.407(a)(1), 91.409(a)(1)(2), 91.417(a)(b) Maintenance, inspections, and record handling

Bonta Vita, Inc. seeks exemption from the maintenance, inspections, and record handling explained in 14 C.F.R. 91.405(a), 91.407(a)(1), 91.409(a)(1)(2), 91.417(a)(b) since many of these rules are pertinent only for manned aircraft with an airworthiness certificate and an equivalent level of safety can be maintained by following maintenance, inspection, and record handling more specific for UAS. Maintenance will be conducted as outlined in the DJI Agras T30 Safety Guidelines and Disclaimer. Inspections will be conducted in accordance with the preflight checklist and maintenance inspections. Maintenance and inspection records will be documented on the appropriate forms and accessible and retained until the work is repeated or superseded by other work or for one year after the work is completed.

14 C.F.R. 137.19(c), Certification Requirements, Commercial operator – pilots

The petitioner requests to be exempt from this provision since the UAS pilot will hold a Remote Pilot Certification. The Remote Pilot Certification process tests the pilot's knowledge of FAA regulation and rules specific for UAS usage. Public safety will not be adversely affected with this exemption because the Remote Pilot Certification tests the knowledge of the UAS pilot on material specific to UAS use which will be more applicable to UAS usage when making an application. Additionally, the pilot will undergo skill and knowledge testing by the chief supervisor to ensure practical application of knowledge and skill.

14 C.F.R. 137.19(d), Certification Requirements- Aircraft

The petitioner requests to be exempt from this provision since the UAS is not certified as is with a manned aircraft. Prior to operation, the UAS will be inspected for any damage or issues that may cause concern during flight. Additionally, the pilot is required to follow a regular maintenance schedule to ensure the components of the aircraft are functioning properly. Any UAS deemed unfit to fly will be out of commission until proper maintenance returns the aircraft to a condition acceptable for flight according to the preflight checklist and maintenance log.

14 C.F.R. 137.19(e)(2)(ii), Certification Requirements; Knowledge and skill tests; skills; approaches to the working area;
14 C.F.R. 137.19(e)(2)(iii), Certification Requirements; Knowledge and skill tests; skills; flare-outs;
14 C.F.R. 137.19(e)(2)(v), Certification Requirements; Knowledge and skill tests; skills; pull-ups and turnarounds

The petitioner requests to be exempt from these provisions since the knowledge and skills testing is not relevant to the UAS operator. Many of the knowledge topics and required skills are specific to manned aircraft, but not practical to UAS operators. An equivalent level of safety will be achieved by testing the operator's skill and knowledge during certification of the pilot. The pilot will demonstrate competency through examination of UAS operation skills and knowledge.

14 C.F.R. 137.31(a), Aircraft Requirements; Certification Requirements

The petitioner requests to be exempt from this provision since the UAS is not certified as is with a manned aircraft. Prior to operation, the UAS will be inspected for any damage or issues that may cause concern during flight. Any UAS deemed unfit to fly will be out of commission until proper maintenance returns the aircraft to a condition acceptable for flight.

14 C.F.R. 137.31(b), Shoulder Harnesses

The petitioner requests to be exempt from this provision since the shoulder harness is impractical for UAS pilots. The rule is intended for manned aircraft; therefore, the exemption would pose no undue risk to the public.

14 C.F.R. 137.33(a), Carrying of certificate; Certificate carried on the aircraft;
14 C.F.R. 137.33(b), Registration and airworthiness certificates available

The petitioner requests to be exempt from this provision and instead carry all necessary paperwork with the Pilot in Command. The rules are more pertinent to manned aircraft and impractical for UAS operations. Public safety will not be adversely affected because all required paperwork will be with the Pilot in Command during operation.

14 C.F.R. 137.41(c), Personnel; Pilot in command; demonstration of knowledge and skills;
14 C.F.R. 137.41(c), Personnel; Pilot in command; commercial certificate

The petitioner requests to be exempt from this provision for similar reasons as stated for 14 C.F.R. 137.19(c) for knowledge and skill tests. Public safety will not be adversely affected with this exemption because the Remote Pilot Certification tests the knowledge of the UAS pilot on material specific to UAS use which will be more applicable to UAS usage when making an application. Additionally, the pilot will undergo skill and knowledge testing by the chief supervisor to ensure practical application of knowledge and skill.

14 C.F.R. 137.42, Fastening of safety belts and shoulder harnesses

The petitioner requests to be exempt from this provision for similar reasons as stated for 14 C.F.R. 137.31(b). The safety belt and shoulder harnesses are impractical for UAS operation. The rule is intended for manned aircraft; therefore, the exemption would pose no undue risk to the public.